

DESCRIPTION

In-Mold Decorated Molded Article and Manufacturing Method for In-Mold Decorated Molded Article

BACKGROUND OF THE INVENTION

Technical Field

The present invention relates to an in-mold decorated molded article and a manufacturing method for in-mold decorated molded articles.

Background Art

An in-mold decorating method is a method in which a decorative sheet providing a decorative layer on a base sheet is arranged between first mold and second mold of an injection mold, a molding resin is injected into a space for molding which is formed by closing of the first mold and the second mold so as to form a molded article, and at the same time the decorative layer is laminated onto the surface of the molded article in one body.

And in recent years, an in-mold decorating method has attracted attention in which a decorative layer is provided on not one side but both sides of a molded resin body, owing to the need to enhance the design property and improve the surface properties of the molded resin, as disclosed in Japanese unexamined patent publication No. H06-99457. In such an in-mold decorating method, a first decorative sheet and a second decorative sheet being arranged in both a first mold and a second mold of an injection mold, and a molding resin is generally injected from a side gate.

In this in-mold decorating method, however, a space for molding is surrounded and covered by the first decorative sheet and the second decorative sheet, so that air generated at the time of injection molding is not completely removed with the result that sink marks and air sumps tend to be generated. Defects in molding such as ink running tend to be generated because an ink layer is provided on both sides of a molded article. Therefore, the size of a gate needs to be considerably increased to prevent these defects during molding.

However, as the gate is made larger, gate cutting becomes more difficult with the result that the gate mark treatment required to achieve an agreeable appearance is also made more difficult. When a transparent molding resin is employed, a side gate mark of unacceptable